

WHAT IS CLAIMED IS:

1 1. A clip comprising a flange larger than a through-
2 hole in an attached member, a shank extending from the
3 flange at one end of the shank to a predetermined height
4 for insertion into the through-hole, a pair of arms
5 extending from an opposite end of the shank and hinged
6 thereto for rotation relative to the shank, and levers
7 extending from bases of respective arms, rotating with the
8 arms, and providing spaces with respect to the arms for
9 receiving portions of a through-hole section of the
10 attached member between the arms and the levers, wherein,
11 in an initial posture, the arms extend substantially
12 axially of the shank, and the levers extend outwardly of
13 the shank to engage one side of the attached member before
14 the shank is inserted into the through-hole, and wherein
15 when the shank is inserted into the through-hole, the arms
16 rotate together with the levers outwardly of the shank from
17 the initial posture to an interposed posture at which the
18 portions of the through-hole section of the attached member
19 are received in the spaces, at which the arms are
20 substantially parallel to the flange and in contact with an
21 opposite side of the attached member, and the flange is in
22 contact with the one side of the attached member.

1 2. The clip of claim 1, wherein the arms and levers
2 are paired diametrically with respect to the shank.

1 3. The clip of claim 1, wherein the levers are hinged
2 at a middle position thereof to allow a tip portion of the
3 levers to rotate relative to a base portion of the levers.

1 4. The clip of claim 1, wherein each arm has an arm-
2 end locking pawl at the base thereof extending towards the
3 flange when the arm is in the interposed posture, and
4 wherein cooperable flange-end locking pawls are formed on
5 the flange or on the shank near the flange to engage the
6 arm-end locking pawls and keep the arms in the interposed
7 posture.

1 5. The clip of claim 1, wherein a protrusion is
2 formed on each arm protruding a fixed height from the
3 opposite end of the shank when the arm is in the interposed
4 posture, and wherein a force to engage each arm-end locking
5 pawl with the cooperable flange-end locking pawl is
6 obtained from pressure on the protrusions.

1 6. The clip of claim 1, wherein the shank and the
2 arms are connected by breakable thin webs for reliably
3 keeping the arms and levers in the initial posture.

1 7. The clip of claim 4, wherein the arm-end locking
2 pawls and the flange are connected by breakable thin webs
3 for reliably keeping the arms and levers in the initial
4 posture.

1 8. The clip of claim 1, wherein boundary surfaces of
2 the spaces between the arms and the levers contact curved
3 boundary surface portions of the through-hole of the
4 attached member and are similarly curved.

1 9. The clip of claim 1, wherein the shank has a
2 hollow section to accommodate a threaded stud, and wherein
3 the hollow section has a pawl for engaging the threaded
4 stud.

1 10. The clip of claim 1, wherein the shank has a
2 hollow section to accommodate a rod-shaped object such as a
3 stud or bolt, and wherein the hollow section is devoid of a
4 pawl.

1 11. A clip for attachment to a sheet member via a
2 through-hole in the sheet member, comprising:
3 a shank having at one end a flange to be disposed at
4 one side of the sheet member against a through-hole section
5 of the sheet member, the shank having cross-dimensions
6 parallel to the flange and having an axial length
7 perpendicular to the flange to permit the shank to be
8 inserted through the through-hole in the sheet member from
9 an initial posture to an interposed posture;
10 a pair of arms hinged to an end of the shank opposite
11 to the flange and projecting substantially axially of the
12 shank in the initial posture for insertion into the
13 through-hole in advance of the shank; and
14 a pair of levers attached to respective arms at base
15 portions thereof and projecting outwardly from said
16 opposite end of the shank in the initial posture for
17 engagement with said one side of the sheet member,
18 wherein the construction of the clip is such that as
19 the shank is inserted into the through-hole, the arms and
20 the levers rotate outwardly of the shank to the interposed
21 posture, at which the arms contact a side of the sheet
22 member opposite to said one side, the levers contact said

23 one side of the sheet member, portions of the through-hole
24 section are received in spaces between the arms and the
25 respective levers, and the flange contacts the levers and
26 said one side of the sheet member.

1 12. A clip according to claim 11, wherein each arm
2 and a portion of the flange or a portion of the flange end
3 of the shank have cooperable pawls that engage one another
4 to maintain the interposed posture.

1 13. A clip according to claim 11, wherein each lever
2 has a hinge at a middle portion so that a tip portion of
3 the lever can bend relative to a base portion of the lever
4 when the tip portion engages said one side of the sheet
5 member.

1 14. A clip according to claim 11, wherein each arm
2 has a protrusion that faces away from the sheet member in
3 the interposed posture.

1 15. A clip according to claim 11, wherein the shank
2 has a hollow section for receiving a stud therein.

1 16. A clip according to claim 15, wherein the shank
2 has at least one pawl inside the hollow section for
3 engaging a threaded stud.

1 17. A clip according to claim 11, wherein each arm
2 has a breakable element for maintaining the initial posture
3 of the arm.